

## ABSTRACT

A coaxial microwave plasma torch, comprising, an outside conductor (1) formed in a cylindrical shape, a cylindrical electric discharge tube (3) fixedly inserted into an axial hole (2) formed in the outside conductor on one end face (4) side, and a coaxial cable (6) having one end fitted to the other end face of the outside conductor. An antenna (9) electrically connected to an inside conductor (8) is fitted to the one end of the coaxial cable and extended into the electric discharge tube through a through-hole (11) axially passed through between the other end face (5) of the outside conductor and the bottom face of the axial hole. The outside conductor (7) of the coaxial cable is electrically connected to the outside conductor, and a gas inlet pipeline (13) supplying a gas into the electric discharge tube is fitted in the outside conductor.